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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,356	11/29/2000	Elango Pakriswamy	V44.12-0138	1295
164	7590	12/19/2003	EXAMINER	
KINNEY & LANGE, P.A. THE KINNEY & LANGE BUILDING 312 SOUTH THIRD STREET MINNEAPOLIS, MN 55415-1002			KAPADIA, VARSHA A	
			ART UNIT	PAPER NUMBER
			2651	

DATE MAILED: 12/19/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/725,356

Applicant(s)

PAKRISWAMY ET AL.

Examiner

Varsha A Kapadia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 19-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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This office action is responsive to the amendment filed on November 14, 2003. Claims 1-16 and 19-20 are pending.

### **Rejection Under 35 U.S.C. 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Ngo et al (5,793,551).

With regards to claim 1, Ngo et al discloses a differential amplifier circuit (see fig.3 and disclosure thereof) comprising: a first and second nodes (see elements 18-21); a first amplifier circuit including an input transistor (see fig.3 elements 44, 58); a second amplifier circuit including an input transistor (see 46, 60); a first coupling circuit including a capacitor and an active element coupled in series between the first input node and the base of the input transistor of the second amplifier circuit (see fig. 3 elements 42, 62, 66, 54 and disclosure thereof); a second coupling circuit including a capacitor and an active element coupled in series between the second input node and the base of the input transistor of the first amplifier circuit (see fig.3 elements 42, 62, 66, 54 and disclosure thereof);

With regards to claim 2, Ngo et al discloses a differential amplifier circuit as described above in this office action with respect to claim 1, wherein Ngo et al that the first and second

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amplifier circuits each include a collector circuit connected between fixed potential (VCC) as claimed and a current generator (see fig.3 elements 52, 70, 72 and 74 and disclosure thereof).

With regards to claims 3- 4, Ngo et al further discloses that the amplifier circuit comprises collector circuit of each of the amplifier circuits includes a cascode stage; a cascode transistor having a base connected to a bias potential and the emitter is connected to the collector of the input transistor of the respective amplifier circuits (see fig.4 elements 70, 72, 74, 76, 58, 44, 46, 60 and disclosure thereof); a resistor as claimed (see fig.4 elements 48, 50, 66, and 68).

With regards to claim 5, Ngo et al discloses differential amplifier circuit comprises a transistor...; a capacitor (see fig.3 elements 62 and 64 and disclosure thereof); a capacitor as claimed (see fig.3 elements 40, 42, 62, 64, 58, 60, 44, 46 and disclosure thereof).

### **Rejection Under 35 U.S.C. 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-16 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ngo et al in view of applicant's admitted prior art (AAPA).

With regards to claims 6-12, limitations recited in claims 6-12 are met in the rejections of claims 1-5 as described above in this office action. Claims 6-12 further recite that the information is read using magnetoresistive head. Ngo et al discloses a read head but fails to specify that the head is a magnetoresistive head.

However, magnetoresistive heads are well known and widely used as read head in the art as also acknowledged by applicant on pages 1-2 of the present application.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the disclosure of Ngo et al to provide a capability of reading the recorded signals using magnetoresistive head, magnetoresistive heads well known and widely used as an alternative read element capability and hence to increase the flexibility.

With regards to claim 13, Ngo discloses a read system comprising: a first and second input nodes (figs 3-4 elements 18-21); a first transistor...and second transistors...(see figs. 3-4 elements 44, 46, 58 and 60 and disclosure thereof); a third transistor... and a fourth transistor...(see fig.4 elements 70 and 72); a first resistor...; a second resistor...(see figs. 3-4 elements 48,50 and disclosure thereof); a first current generator... a second current generator...(see figs. 3-4 elements 52, 72); a fifth transistor... and a sixth transistor...(see figs. 3-4 elements 62, 64 and disclosure thereof); a first capacitor... and a second capacitor... (see fig.3 elements 40 and 42); a third current generator and a fourth current generator... (see figs. 3-4 elements 70, 72 and disclosure thereof).

Ngo et al however, fails to disclose that the read head is a magnetoresistive type read head. AAPA discloses such limitations as described above in this office action and therefore, AAPA is relied upon for the same reasons as stated above.

With regards to claims 14-16, these limitations are met in the rejection of claims 6-12 as applied above in this office action.

With regards to claims 19 and 20, Ngo et al further teaches steps of coupling the respective capacitor and respective active element in series between the respective input signal

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node and the other amplifier transistor comprises connecting a control element of the active elements to the input signal node and connecting a controlled element of the active elements to the input signal nodes and connecting a controlled element of the active element to a control element of the other amplifier transistor (see figs. 3 and 4).

**Prior Art Cited**

Reference to Voorman et al (5,909,024) cited as of interest.

**Response to Remarks**

Applicant's arguments with respect to claims 1-16 and 19-20 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Varsha A Kapadia whose telephone number is (703) 305-4198. The examiner can normally be reached on Mon-Wed from 6:30 AM to 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



VK



DAVID HUDSPETH  
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